MISSOURIENSIS

Journal of the Missouri Native Plant Society

Volume 13 1992 Number 1

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Published for the Society
at
Southwest Missouri State University

COUNTY RECORD VOUCHERS FOR VASCULAR PLANT SPECIES NEWLY RECORDED FOR MISSOURI SINCE 1963

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Research on the flora of Missouri and botanical explorations in the state during the past thirty years have resulted in the discovery of numerous new records of vascular plants not recorded in Steyermark's *Flora of Missouri* (1963). A recent update (Yatskievych and Turner, 1990) compiled information on these additions to the flora together into a comprehensive checklist, but a significant number of other new finds have been published since then (see below). New records for the Missouri flora continue to be discovered at the rate of ten to twelve taxa annually, and this rate shows no evidence of decline.

Corcoran and Weber (1991) recently summarized their efforts on behalf of the Missouri Native Plant Society (MONPS) to computerize the county-level distributions of all vascular plant taxa presently known to grow outside of cultivation in the state. During the past eleven years the distributional data from Steyermark's Flora have been supplemented with several thousand vouchered county records, which have been submitted largely by MONPS members and published in a series of columns in **Missouriensis** (for summary see Corcoran and Weber, 1991. However, with few exceptions (Raveill & Taylor, 1983, 1984), no previous attempt has been made to tabulate the county-level distributions for additions to the flora. The purpose of this paper is to present a tabulation of these records, based on a review of herbarium specimens, in a format that should allow easy incorporation into the Missouri Flora Atlas database. Plant collectors in Missouri may also benefit from the knowledge of which counties the newer plant records have been collected in.

METHODS AND MATERIALS

A list of taxa recorded for Missouri since Steyermark (1963) was developed during library and herbarium research at the Flora of Missouri Project and has been continually updated. A map number was assigned to each taxon by aligning it with its closest relative in the existing flora (Weber and Corcoran, 1991). The first new record to be aligned with a given "Steyermark" taxon was designated with the map number of the related taxon, plus the suffix ".09". In a few cases, subsequent additions in the same species complex were designated ".19", ".29", etc.

An attempt was made to locate herbarium specimens to voucher the county-level distribution of each new record. In the interest of timeliness, some of

the records were verified through correspondence with curators at various herbaria. Herbarium records were tabulated using the format in the most recent *Missouri Botanical Record* (Weber and Corcoran, 1991). Herbarium abbreviations follow those in Holmgren et al. (1990), except for the following herbaria not included in that work: University of Missouri, Kansas City (UMKC), University of Missouri, Columbia, Integrated Pest Management Herbarium (UMO/IPM).

RESULTS

We were unable to locate any vouchers to support thirteen of the taxa reported as occurring in Missouri by Yatskievych and Turner (1990) and the earlier references cited therein. In some cases, such as *Rapistrum rugosum*, these specimens exist, but have not been formally donated to an herbarium by their collectors. Most of the others probably exist in herbaria not inventoried during our study. Further research will be necessary to verify or eliminate these taxa as members of Missouri's flora. The taxa that could not be confirmed (followed by a suggested map number) are: *Aster lanceolatus* Willd. ssp. *hesperius* (A. Gray) Semple & Chmielewski (2200.40); *Carex diandra* Schrank (459.09); *Castanea pumila* (L.) Miller var. *pumila* (758.10); *Cicuta maculata* L. var. *bolanderi* (S. Watson) G. Mulligan (1654.10); *Cyperus luzulae* (L.) Retz. (387.09); *Populus deltoides* Bartram ex Marshall ssp. *monilifera* (Aiton) Eckenwalder (737.30); *Solidago bicolor* (2150.09); *Solidago rigida L.* ssp. *humilis* (Porter) Heard & Semple (2165.20); *Rapistrum rugosum* (L.) All. (1047.09); *Verbena urticifolia* L. var. *leiocarpa* Perry & Fern. (1840.20); *Viola affinis* Le Conte (1561.09); *Viola pratincola* E. Greene (1561.19).

In some cases, taxa listed by Yatskievych and Turner (1990) as new to Missouri represent the redetermination by specialists of plants included by Steyermark (1963) under a different name (the name in Steyermark corrsponds to a valid taxon not occurring in Missouri). In cases where all Missouri material was misdetermined in a consistent fashion, no new map number is necessary. Table 1 lists the corrected names for such taxa and the Steyermark map number with which they correspond. Taxa in both tables 1 and 2 are listed alphabetically by family, with the pteridophytes, monocots, and dicots in that order. Reasons for excluding the taxa listed in Steyermark (1963) for these map numbers were given by Yatskievych and Turner (1990).

County records documenting the distributions of other taxa reported since 1963 are listed in table 2, along with suggested map numbers. The species listed in the *Supplement* that appeared in later printings of Steyermark's flora are also included, as these were not assigned maps or map numbers previously.

In some cases, the specimens cited and the counties of occurrence differ from those listed in the original published reports for these taxa. This may be because additional county records have been documented, or because we were unable to locate all of the original collections cited by some authors. In each case we have attempted to be as complete as possible in circumscribing the known range for every new addition to Missouri's flora published to date. Future collectors will undoubtedly expand our knowledge of the distributions of many of these plants in the state.

DISCUSSION

The present tabulation represents an important step toward updating the distributional data on the flora of Missouri. However, much research is still necessary before a computerized atlas can hope to be reasonably precise and complete. One of the biggest potential problems in adding data on new records is the affect of these additions on the perceived ranges of existing species. In several cases, additions to the flora represent taxa segregated from previously recognized ones. For example, records representing both *Platanthera praeclara* and *Platanthera leucophaea* were included by Steyermark (1963) in his distributional data under *Habenaria leucophaea*. Similarly, many of the records ascribed to *Selaginella apoda* by Steyermark actually refer to the more recently described *Selaginella eclipes*. The existing taxa from which some of the taxa in table 2 have been segregated will require reexamination, and in some cases will have one or more counties deleted from their ranges.

ACKNOWLEDGMENTS

We are indebted to the following botanists, who examined and verified records in their herbaria for this report: Nancy Hensold (F); Robin Kennedy (UMO); Paul Redfearn (SMS); Anton Reznicek (MICH). We also greatly appreciate the support that the members of MONPS have provided to the Flora of Missouri Project during its first half-decade of discovery.

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Table 1. New records representing replacements for taxa previously misdetermined in Steyermark (1963) and their corresponding map numbers. References validating these changes were cited in Yatskievych and Turner (1990).

TAXON (NEW DETERMINATION)	MAP
Dryopteris celsa (W. Palmer) Small	61
Fimbristylis puberula (Michaux) M. Vahl var. *puberula*	404
Spiranthes ovalis Lindley var. *erostellata* Catling	703
Torilis arvensis (Hudson) Link	1642
Carduus nutans L. ssp. *leiophyllus* (Petrovic) Stoy. & Stef.	2354
Atriplex truncata (Torrey) A. Gray	867
Hypericum majus (A. Gray) Rusby	1544
Euphorbia cyathophora Murray	1445
Utricularia macrorhiza Le Conte	2018
Linum rigidum Pursh var. *compactum* (Nelson) C. Rogers	1404
Ammannia robusta Heer & Regel	1581
Oxalis florida Salisb. ssp. *florida*	1410
Rumex cristatus DC.	813
Tamarix parviflora DC.	1551
Kallstroemia parviflora Norton	1419

Table 2. County records and map numbers for new additions to the Missouri flora since 1963. Where not indicated in a footnote, the literature source for each new report was cited by Yatskievych and Turner (1990). Footnotes follow the table.

TAXA	COUNTY	COLLECTOR	HERB	MAP NO
		ADIANTACEAE		
Pellaea glabella Mett. ex Kuhn var. *missouriensis*	Carter	*Gastony 83-41*	IND	29.10
	Dent	*Gastony 83-31*	IND	
	Jefferson	*Yatskievych & Gastony 90-14*	MO	
	Pulaski	*Gastony 82-27c*	IND	
		ASPLENIACEAE		
Asplenium montanum Willd.	Montgomery	*Dunlap 24754*	UMO	42.09
		MARSILEACEAE		
Pilularia americana Braun	Barton	*Dunlap s.n.*	UMO	20.09
	Lincoln	*Schuette 1817*	MO	
		OPHIOGLOSSACEAE		
Ophioglossum crotalophoroides Walter	Oregon	*Thomas et al 38497*	MO	17.09.
Ophioglossum petiolatum Hook.	Pemiscot	*Thomas & Marx 34700*	MO	16.09
		EQUISETACEAE		
Equisetum x ferrissii Clute	Clark	*Skinner 2143*	MO	13.09
Equisetum pratense Ehrh.	Clark	*Jacobs s.n.*	MO	10.09
Selaginella eclipes Buck	Barry	*Steyermark 22529*	MO	5.09
	Butler	*Yatskievych et al 91-235*	MO	
	Carter	*Steyermark 11449*	MO	
	Crawford	*Steyermark 19780*	MO	
	Dent	*Steyermark 19393*	MO	
	Douglas	*Wagner et al 74159*	MO	
	Howell	*Redfearn & Weber 32789*	MO	
	Iron	*Steyermark* 19825	MO	
	Jefferson	*Redfearn 20811*	SMS	
	Laclede	*Steyermark 13897*	MO	
	McDonald	*Bush s.n.*	MO	
	Oregon	*Steyermark 12103*	MO	

TABLE 2 (CONTINUED)

	Osage	*Steyermark 27643*	MO	
	Ozark	*Steyermark 15588*	MO	
	Polk	*Steyermark 71392*	MO	
	Pulaski	*Steyermark 25281*	MO	
	Ripley	*Steyermark 14288*	MO	
	Ste.Genevieve	*Steyermark 21103*	MO	
	Shannon	*Yatskievych et al 90-422*	MO	
	Taney	*Steyermark 66353*	MO	
	Texas	*Steyermark 14581*	MO	
	Washington	*Steyermark 21051*	MO	
		CYPERACEAE		
[1]*Carex abscondita* Mackenzie	Ripley	*Yatskievych et al 89-131*	MO	496.09
Carex atlantica L. Bailey	Shannon	*Orzell 261B*	MO	465.09
ssp. *atlantica*	Stoddard	*Steyermark 78281*	MO	
	Wayne	*Orzell 927*	MO	
Carex bicknellii Britton	Barton	*Castaner 5273*	WARM	478.10
var. *opaca* F. J. Herm.	Ripley	*Yatskievych et al 89-131*	MO	
	Stoddard	*Yatskievych et al 89-120*	MO	
Carex bromoides Schk. ex Willd.	Bollinger	*Christ s.n.*	MO	465.29
	Butler	*Summers 426*	MO	
	Wayne	*Orzell 1010*	MO	
Carex crawfordii Fern.	St. Louis	*Muehlenbach 3751*	MO	467.09
Carex eleocharis L. Bailey	St. Louis	*Muehlenbach 1951*	MO	443.09
Carex platyphylla J. Carey	Howard	*Smith 82*	US	496.19
Carex socialis Mohl.	Pemiscot	*Steyermark 5115 & Schwegman*	MO	448.09
	Mississippi	*Yatskievych 92-114*	MO	
Carex sterilis Willd.	Dent	*Orzell 982*	MICH	465.19
	St. Francois	*Orzell 263*	MICH	
	Shannon	*Orzell 262*	MICH	
Carex sychnocephala J. Carey	Platte	*Castaner 10089*	MO	466.09
Cyperus flavicomus Michaux	Stoddard		UMO	364.09
[2]*Cyperus grayioides* Mohl.	Mississippi	*Bryson 10472*	MO	384.09
	New Madrid	*Carter 8263*	MO	
	Scott	*Bryson 10478*	MO	
Cyperus retroflexus Buckley	Mississippi	*Bryson 10473*	MO	382.09
Eleocharis atropurpurea (Retz.) Kunth	Platte	*Castaner 7260*	WARM	396.09
Fimbristylis miliacea (L.) M. Vahl	Stoddard	*Taylor s.n.*	UMO	407.07
Fuirena simplex M. Vahl	Holt	*Steyermark 15094*	MO	427.10
var. *aristulata* (Torrey) Kral	Jackson	*Bush 223*	MO	
Scirpus deltarum Schuyler	Holt	*Steyermark 15116*	MO	413.09

TABLE 2 (CONTINUED)

	Howard	*Steyermark 14781*	MO	
Scirpus pedicellatus Fern.	Adair	*Palmer & Steyermark 41144*	MO	425.09
	Mason	*Steyermark 40585*	WIS	
	Putnam	*Palmer & Steyermark 41071*	MO	
Scirpus saximontanus Fern.	Platte	*Castaner 7259*	WARM	410.09
	DIOSCORIACEAE			
Dioscorea batatas Decne.	Howell	*Summers 3515*	MO	658.09
	Reynolds	*Nelson s.n.*	MODNR	
	Wayne	*Yatskievych et al. 89-170*	MO	
	HYDROCHARITACEAE			
[3]*Egeria densa* Planchon	Oregon	*Redfearn 26628*	SMS	101.09
	IRIDACEAE			
Iris orientalis Miller	Platte	*Henderson 67-687*	UMKC	668.09
	JUNCACEAE			
Juncus gerardii Loisel	St. Louis	*Muehlenbach 2356*	MO	590.09
	LEMNACEAE			
Lemna aequinoctialis Welw.	Dent	*Palmer & Steyermark 41419*	MO	561.09
	Dunklin	*Trelease s.n.*	MO	
	Howell	*Steyermark 5222*	MO	
	Jackson	*Bush s.n.*	MO	
	Jasper	*Palmer 2200*	MO	
	Ozark	*Kellogg s.n.*	MO	
	Ripley	*Yatskievych et al. 89-127*	MO	
	St. Charles	*Sarger s.n.*	MO	
	St. Louis	*Thompson s.n.*	MO	
	Wayne	*Steyermark 6587*	MO	
Lemna obscura (Austin) Daubs	Dunklin	*Bush s.n.*	MO	558.09
	St. Louis	*Thompson s.n.*	MO	
	Scott	*Eggert s.n.*	MO	
Lemna turionifera Landolt	Clark	*Steyermark 28744*	F	560.09
	Jackson	*Bush 156*	MO	

TABLE 2 (CONTINUED)

LILIACEAE				
Allium burdickii (Hanes) A. G. Jones	DeKalb	*Steyermark 69532*	MO	616.09
	Dent	*Chandler 5070*	MO	
	Jefferson	*Turner s.n.*	MO	
	Mercer	*Palmer & Steyermark 41325*	MO	
Convallaria majalis L.	Jackson	*Henderson 65-112*	MO	642.09
Erythronium rostratum W. Wolf	Madison	*Summers 3155*	MO	629.09
Narcissus x medioluteus Miller	St. Louis	*Muehlenbach 3503*	MO	660.09
NAJADACEAE				
[3]*Najas flexilis* All.	Butler	*Summers 5137*	MO	13.09
	Wayne	*Summers 5318*	MO	
ORCHIDACEAE				
Platanthera praeclara Sheviak & Bowles	Atchison	*Summers 1531*	MO	690.09
Spiranthes magnicamporum Sheviak	Camden	*Summers 1571*	MO	702.09
	Christian	*Summers 1579*	MO	
	Franklin	*Shea 291*	MO	
	Howell	*Summers 935*	MO	
	Jefferson	*Summers 1500*	MO	
	Miller	*M. Wallace s.n.*	MO	
	Montgomery	*Schuette 1637*	MO	
	Ozark	*Yatskievych 88-252*	MO	
	St. Francois	*Summers 638*	MO	
	Shannon	*Summers et al. 3913*	MO	
	Stone	*Summers 975*	MO	
	Taney	*Redfearn & & Wu 33219*	MO	
	Texas	*Summers & Ryan 3786*	MO	
	Webster	*Summers 3111*	MO	
	Wright	*Summers & Ryan 3868*	MO	
Tipularia discolor (Pursh) Nutt.	Butler	*Summers & Pelton s.n.*	MO	712.09
	Oregon	*Summers 2854*	MO	
	Stoddard	*Summers 3056*	MO	

TABLE 2 (CONTINUED)

POACEAE				
Agropyron desertorum (Fisher ex Link) Schultes	Franklin	*Davit s.n.*	MO	176.09
	St. Louis	*Muehlenbach 2471*	MO	
Aira caryophyllea L.	Greene	*Toney s.n.*	UMO	268.09
	Howell	*Summers 2696*	MO	
	Taney	*Castaner 1085*	WARM	
	Wayne	*Freckmann 12497*	UWSP	
Bothriochloa bladhii (Retz.) S. T. Blake	Howell	*Bennett 901*	UMO	357.09
Bromus arvensis L.	St. Louis	*Muehlenbach 4172*	MO	111.19
Bromus commutatus Schrader	Barton	*G. & K. Yatskievych 88-34*	MO	111.09
	Benton	*Steyermark 5777*	MO	
	Jackson	*Bush s.n.*	MO	
	Jasper	*Palmer 3781*	MO	
	Marion	*Davis 8839*	MO	
	Monroe	*Hinterthuer 173A*	MO	
	St. Clair	*Castaner 5789*	MO	
	St. Louis	*Muehlenbach 3269*	MO	
Chasmanthium laxum (L.) Yates ssp. *sessiliflorum* (Poiret) L. Clark	St. Louis	*Kellogg s.n.*	MO	163.10
Cynosurus echinatus L.	St. Louis	*Muehlenbach 1628*	MO	193.09
Dichanthelium sabulorum (Lam.) Gould & C. A.Clark var. *thinium* (A. Hitchc. & Chase) Gould & C. A. Clark	Reynolds	*Nelson s.n.*	MO-DNR	308.09
Echinochloa utilis Ohwi & Yab.	St. Louis	*Muehlenbach 3349*	MO	337.01
Elymus elongatus (Host) Rumem.	St. Louis	*Muehlenbach 2756*	MO	174.09
Eragrostis barrelieri Daveau	St. Louis	*Muehlenbach 2732*	MO	149.09
Eragrostis curtipedicellata Buckley	St. Louis	*Muehlenbach 1993*	MO	155.09
Eragrostis elliottii S. Watson	St. Louis	*Muehlenbach 3183*	MO	154.09
Eragrostis multicaulis Steudel	St. Louis	*Muehlenbach 3723*	MO	147.09
Eragrostis secundiflora C. Presl ssp. *oxylepis (Torrey)* S. Koch	St.Louis	*Muehlenbach 1931*	MO	155.19
Eriochloa villosa (Thumb.)Kunth	Audrain	*Bullard s.n.*	UMO	283.09
	St. Francois	*G. & K. Yatskievych 88-213*	MO	
Leptochloa dubia (Kunth) Nees	St. Louis	*Muehlenbach 2407*	MO	255.09
Lolium persicum Boiss. & Hohen.	St. Louis	*Muehlenbach 1176*	MO	193.09
Lolium rigidum Gaudin	St. Louis	*Muehlenbach 1411*	MO	193.19
Microstegium vimineum (Trin.) A. Camus	Oregon	*Summers & Dodd 3920*	MO	347.29
Miscanthus sacchariflorus (Maxim.) Hackel	Johnson	*Delozier 1315*	MO	347.09
Miscanthus sinensis Andersson	Warren	*Steyermark & Branson 132195*	MO	347.19

TABLE 2 (CONTINUED)

Paspalum urvillei Steudel	St. Louis	*Muehlenbach 3070*	MO	293.09
Pennisetum ciliare (L.) Link	St. Louis	*Muehlenbach 1627*	MO	346.09
Poa interior Rydb.	Cass	*Smith 2429*	MO	140.09
Sacciolepis striata (L.) Nash	Oregon	*Yatskievych & Summers 90-404*	MO	336.09
Sclerochloa dura (L.) P. Beauv.	Barry	*Ladd 6346*	MO-DNR	164.09
	Dallas	*Ladd 4836*	MO-DNR	
	Laclede	*Ladd 6239*	MOR	
	St. Louis	*Ladd 13935*	MO	
Setaria viridis (L.) P. Veauv. var. *major* (Gaudin) Posp.	St. Louis	*G. & K. Yatskievych 90-272*	MO	343.10
Stenotaphrum secundatum (Walter) Kunze	Stone	*Ellis s.n.*	MO	323.09
Vulpia bromoides (L.) Gray	Jaspe	*Christ 19-3-3A*	MO	117.09
	PONTEDERIACEAE			
Heteranthera multiflora (Griseb.) C. Horn	Bates	*Steyermark 21282*	MO	582.09
	Boone	*Christian s.n.*	UMO	
	Christian	*Palmer 64386*	UMO	
	Clay	*Mackenzie s.n.*	MO	
	Greene	*Standley 9066*	US	
	Holt	*Demetrio s.n.*	MO	
	Jackson	*Bush 443*	MO	
	Laclede	*Moore s.n.*	F	
	Lincoln	*Kellogg 823*	MO	
	Livingston	*Bush 9418*	F	
	Newton	*Palmer 53019*	UMO	
	St. Charles	*Kellogg s.n.*	MO	
Heteranthera rotundifolia (Kunth) Griseb.	Barry	*Steyermark 65114*	MO	583.09
	Buchanan	*Steyermark 70105*	F	
	Christian	*Palmer 58238*	UMO	
	Greene	*Blankenship s.n.*	MO	
	Holt	*Demetrio 3*	F	
	Howell	*Steyermark 23581*	MO	
	Jackson	*Bush 845*	MO	
	Jasper	*Palmer 2623*	MO	
	Laclede	*Steyermark 64723*	F	
	Lawrence	*Palmer 51319*	F	
	McDonald	*Bush s.n.*	MO	
	Montineau	*Steyermark 76609*	MO	
	New Madrid	*Coll s.n.*	UMO	
	Newton	*Palmer 63278*	UMO	
	Oregon	*Steyermark 78901*	UMO	
	Pemiscot	*Steyermark 26707*	F	
	Polk	*Palmer 66926*	UMO	
	Stone	*Steyermark 22705*	MO	

TABLE 2 (CONTINUED)

	Taney	*Steyermark 22787*	MO	
	SMILACACEAE			
Smilax illinoensis Mangaly	Franklin	*McBride et al. 46*	MO	652.09
	Jefferson	*Steyermark 1066*	MO	
	Pike	*Steyermark 28611*	F	
	Schuyler	*Steyermark 69915*	F	
	ACERACEAE			
[5]*Acer ginnala* Maxim.	Lincoln	*Ebinger 25164*	MO	1484.09
	AMARANTHACEAE			
Amaranthus tricolor L.	St. Louis	*Muehlenbach 3449*	MO	883.09
	ANACARDIACEAE			
Toxicodendron radicans (L.) Kuntze ssp. *pubens* (Engelm. ex S. Watson) Gillis	Carter	*Gillis 3795*	MSC	1472.20
	Henry	*Hitchcock s.n.*	MO	
	Iron	*Smith 441*	F	
	Jackson	*Bush s.n.*	MO	
	APIACEAE			
Berula erecta (Hudson) Cov. var. *incisum* (Torrey) Cronq.	Lafayette	*Gremaud s.n.*	MO	661.09
	Saline	*Kramer s.n.*	MO	
Trepocarpus aethusae Nutt. ex DC.	Mississppi	*Summers 4946*	MO	1639.09
	ASCLEPIADACEAE			
Asclepias subverticillata (A. Gray) Vail	St. Louis	*Muehlenbach 2000*	MO	1763.09
	ASTERACEAE			
Artemisia absinthium L.	St. Louis	*Muehlenbach 1706*	MO	2341.09
[6]*Aster macrophyllus* L.	Howell	*Summers 3305*	MO	2176.09
	Shannon	*Summers 3110*	MO	
	Texas	*Summers 1480*	MO	
Aster pubentior Cronq.	Lafayette	*Gremaud et al. s.n.*	MO	2202.09
Bidens alba (L.) DC. var. *radiata* (Schultz-Bip) Ballard	St. Louis	*Muehlenbach 3046*	MO	2299.09
Bidens coronata (L.) Britton	St. Louis	*Muehlenbach 3706*	MO	2304.09

TABLE 2 (CONTINUED)

Boltonia diffusa Elliott var. *diffusa*	St. Louis	*Letterman s.n.*	NY	2174.10
Centaurea diffusa Lam.	Howard	*Slater 1667*	UMO/ IPM	2371.09
	St. Louis	*Muehlenbach 1659*	MO	
Centaurea diluta Dryander	St. Louis	*Muehlenbach 3299*	MO	2365.19
Cirsium texanum Buckley var. *texanum*	St. Louis	*Muehlenbach 2663*	MO	2359.09
Cosmos parviflorus (Jacq.) Pers.	St. Louis	*Muehlenbach 2285*	MO	2308.09
Crepis tectorum L.	St. Louis	*Muehlenbach 1802*	MO	2399.09
Echinacea simulata McGregor	Butler	*McGregor 17154*	KANU	2262.09
	Camden	*Brooks 19798*	MO	
	Cape Girardeau	*Palmer 18016*	MO	
	Carter	*McGregor 17183*	KANU	
	Crawford	*McGregor 15636*	KANU	
	Dent	*McGregor 15635*	KANU	
	Dunklin	*Bauer 11450*	F	
	Franklin	*Greenman 4121*	MO	
	Iron	*Palmer 18088*	MO	
	Jefferson	*Eggert s.n.*	MO	
	Oregon	*Harms 321*	KANU	
	Phelps	*Steyermark 25337*	MO	
	Reynolds	*McGregor 17192*	KANU	
	St. Francois	*Steyermark 28797*	F	
	St. Louis	*Churchill 4120*	MO	
	Shannon	*Harms 322*	KANU	
	Texas	*Harms 325*	KANU	
	Washington	*Dewart s.n.*	MO	
Eupatorium capillifolium (Lam.) Small	St. Louis	*Muehlenbach 3812*	MO	2122.09
[7]*Eupatorium maculatum L.*	Lafayette	*Ladd 13302*	MOR	2118.09
[8]*Evax prolifera* Nutt. ex DC.	Ozark	*Webster Groves Nature Study Society s.n.*	MO	2218.09
Gutierrezia texana (DC.) Torrey & A. Gray	St. Louis	*Muehlenbach 1715*	MO	2142.09
Helianthus rigidus (Cass.) Desf. ssp. *subrhomboideus* (Rydb.) Heiser, D. M. Smith, Clev., & W. Martin	St. Louis	*Muehlenbach 2745*	MO	2273.20
Heliopsis helianthoides (L.) Sweet var. *helianthoides*	St. Louis	*Sherff s.n.*	MO	2250.20
Iva annua L. var. *caudata* (Small) R. Pike	Marion	*Davis 6287*	MO	2220.20
	Jackson	*Woodson 877*	MO	
	St. Louis	*Glatfelter s. n.*	MO	
Lactuca sativa L.	St. Louis	*Muehlenbach 4002*	MO	2389.09

TABLE 2 (CONTINUED)

Liatris scariosa (L.) Willd. var. *nieuwlandii* Lunell	Barry	*Bush 3189*	MO	2133.09
	Iron	*Russell s.n.*	MO	
	Oregon	*Summers 2838*	MO	
	Pike	*Davis 6172*	MO	
	St. Louis	*Hersford s.n.*	MO	
	Stone	*Robertson 318*	MO	
Picris echioides L.	St. Louis	*Muehlenbach 3300*	MO	2380.09
Picris hieracioides L. ssp. *hieracioides*	St. Louis	*Muehlenbach 3377*	MO	2380.19
Ratibida tagetes (E. James) Barnhart	St. Louis	*Muehlenbach 2029*	MO	2266.09
Senecio ampullaceus Hook.	St. Louis	*Muehlenbach 1735*	MO	2347.09
Senecio tomentosus Michaux	Barry	*Bush 276*	MO	2348.09
Solidago rigida L. ssp.	Jefferson	*Steyermark 4457*	MO	2165.10
glabrata (E. Braun) Heard & Semple	Ozark	*Yatskievych 88-253*	MO	
Tagetes patula L.	St. Louis	*Muehlenbach 1461*	MO	2322.09
Verbesina encelioides (Cav.)	Dunklin	*Steyermark 83410*	MO	2288.10
Benth. & Hook. f.	Jackson	*Bush 9392*	MO	
ssp. *encelioides*	St. Louis	*Eisendrath s.n.*	MO	
Vernonia x illinoensis Gleason	Boone	*Jeffrey 186*	MO	2113.09
	Chariton	*Steyermark 26453*	MO	
	Gasconade	*Steyermark 8253*	MO	
	Iron	*Steyermark 12863*	MO	
	Jackson	*Bush 11508*	MO	
	Johnson	*Steyermark 24659*	MO	
	Lewis	*Shoop 1142*	MO	
	Lincoln	*Steyermark 8959*	MO	
	Marion	*Davis 9760*	MO	
	Randolph	*Steyermark 16026*	MO	
	St. Charles	*Steyermark 9252*	MO	
	St. Francois	*Shoop 1161*	MO	
	St. Louis	*Greenman 4009*	MO	
	Scotland	*Shoop 1140*	MO	
	Scott	*Eggert s.n.*	MO	
	Shannon	*Steyermark 12695*	MO	
	Washington	*anonymous s.n.*	MO	
Vernonia x peralta Daniels	Boone	*Daniels s.n.*	UMO	2113.19
	BORAGINACEAE			
Brunnera macrophylla (Adams) I. M. Johnston	Boone	*Allison 21*	UMO	1830.09
Heliotropium curassavicum L. var. *curassavicum*	Cooper	*Jagger s.n.*	MO	1816.09
Myosotis stricta Link ex Roemer & Schultes	St. Louis	*Christ s.n.*	MO	1831.09

TABLE 2 (CONTINUED)

BRASSICACEAE				
Alliaria petiolata (M. Bieb.) Cavara & Grande	Holt	*McGregor 36900*	MO	1101.09
	Jackson	*Henderson 67-333*	UMKC	
	Linn	*Schuette 1978*	MO	
	St. Louis	*Boufford 18953*	MO	
	Taney	*Scott 3251*	SOTO	
Alyssum alyssoides (L.) L.	Cass	*Henderson 66-361*	MO	1061.09
	Holt	*Henderson 67-726*	UMKC	
Alyssum desertorum Stapf	Pettis	*Miller 77*	WARM	1061.19
Arabis glabra (L.) Bernh.	St. Louis	*Lodewyks s.n.*	MO	1080.09
Aubrieta deltoidea (L.) DC.	Boone	*Allison 15*	UMO	1066.09
Brassica napus L. var. *napus*	St. Louis	*Muehlenbach 100*	MO	1042.09
Brassica oleracea L.	St. Louis	*Muehlenbach 2088*	MO	1042.19
Cardamine diphylla (Michaux) Alph. Wood	Chariton	*Young s.n.*	CM	1076.09
Cardaria draba (L.) Desv. ssp. *chalepensis* (L.) O. Sculz	Clinton	*Henderson 66-291*	MO	1054.10
Lepidium latifolium L.	Jackson	*Henderson 75-01*	MO	1051.09
Lobularia maritima (L.) Desv.	Jackson	*Bush s.n.*	MO	1061.29
	St. Louis	*Muehlenbach 3450*	MO	
Rorippa tenerrima E. Greene	St. Louis	*Engelmann s.n.*	MO	1089.09
Rorippa truncata (Jepson) Stuckey	Jackson	*Bush s.n.*	MO	1089.19
	St. Charles	*Eggert s.n.*	MO	
	St. Louis	*Eggert s.n.*	MO	
CACTACEAE				
Opuntia polyacantha Haw. var. *polyacantha*	Jasper	*Palmer s.n.*	US	1575.09
CANNABACEAE				
Humulus lupulus L. var. *pubescens* E. Small	Andrew	*Steyermark 15154*	MO	792.10
	Barry	*Trelease 1196*	MO	
	Cape Girardeau	*Kellogg s.n.*	MO	
	Harrison	*Steyermark 76553*	MO	
	Jackson	*Bush 6956*	MO	
	Jasper	*Palmer 1258*	MO	
	Jefferson	*Eggert s.n.*	MO	
	Marion	*Davis 3092*	MO	
	Ralls	*Davis 3713*	MO	
	St. Francois	*Bush s.n.*	MO	
	St. Louis	*Engelmann s.n.*	MO	

TABLE 2 (CONTINUED)

CAPRIFOLIACEAE				
Lonicera maackii (Rupr.) Maxim.	Franklin	*Croat 3902*	MO	2063.09
	St. Louis	*Muehlenback 3985*	MO	
Lonicera xylosteum L.	Jasper	*Palmer 69188*	MO	2063.19
	St. Louis	*Summers 2748*	MO	
Sambucus canadensis L. var. *laciniata* A. Gray	Hickory	*Castaner 4219*	MO	2081.30
Symphoricarpos albus (L.) S. F. Blake	St. Louis	*Muehlenbach 3485*	MO	2070.09
Triosteum angustifolium L. var. *angustifolium* f. *rubrum* F. Lane	Phelps	*Kellogg 23*	US	2073.20
CAROPHYLLACEAE				
Cerastium pumilum Curtis ssp. *pumilum* f. *medium* Moeschl	St. Louis	*Muehlenbach 3231*	MO	924.09
Cerastium semidecandrum L.	St. Louis	*Muehlenbach 3520*	MO	924.19
Dianthus plumarius L.	Camden	*McReynolds 750713*	LSU	947.09
Lychnis coronaria (L.) Desr.	St. Louis	*Solomon s.n.*	MO	933.09
	Stone	*Kastler s.n.*	UMO	
Myosoton aquaticum (L.) Moench	Clay	*Raveill 2319*	MO	918.09
Sagina procumbens L.	Ripley	*Yatskievych et al. 89-136*	MO	913.09
Silene armeria L.	St. Louis	*Muehlenbach 3451*	MO	934.09
CELASTRACEAE				
Euonymus fortunei (Turcz.) Hand.-Mazz.	St. Louis	*Muehlenbach 3142*	MO	1479.09
CHENOPODIACEAE				
Atriplex heterosperma Bunge	St. Louis	*Muehlenbach 1026*	MO	864A.09
[9]*Beta vulgaris* L.	St. Louis	*Muehlenbach 1963*	MO	864.09
Chenopodium ficifolium Smith	St. Louis	*D'Arcy 5963*	MO	859.09
Chenopodium opulifolium Schrader ex Koch & Ziz	St. Louis	*Muehlenbach 3301*	MO	860.09
Chenopodium watsonii Nelson	St. Louis	*Muehlenbach 1795*	MO	860.19
Salsola collina Pallas	St. Charles	*Yatskievych et al. 88-223*	MO	874.09
	St. Louis	*Muehlenbach 2176*	MO	

TABLE 2 (CONTINUED)

CISTACEAE				
Helianthemum canadense (L.) Michaux	Maries	*Steyermark 27590*	F	1552.09
CONVOLVULACEAE				
Calystegia macounii (E. Greene) Brummitt	Jackson	*Bush 1998*	MO	1780.09
[6]*Dichondra carolinensis* Michaux	Howell	*Summers 2840*	MO	1771.09
Ipomoea amnicola Morong	Jackson	*Bush 9691*	MO	1777.09
Ipomoea cairica (L.) Sweet	St. Louis	*Muehlenbach 1711*	MO	1778.09
Jacquemontia tamnifolia (L.) Griseb.	St. Louis	*Muehlenbach 3188*	MO	1778.09
Stylisma pickeringii (Torrey) A. Gray var. *pattersonii* (Fern. & B. G. Schubert) Myint	Clark	*Conrad 11099*	MO	1771.19
CRASSULACEAE				
Sedum acre L. ssp. *acre*	Iron	*Smith 1077*	F	1113.09
	St. Louis	*Sherff 191*	F	
CUCURBITACEAE				
Cucumis sativus L.	St. Louis	*Muehlenbach 1847*	MO	2093.09
DIPSACACEAE				
Dipsacus laciniatus L.	Boone	*Baumgartner s.n.*	MO	2088.09
	Caldwell	*Dierker 1214*	UMO/ IPM	
	Calloway	*Dierker 1275*	UMO/ IPM	
	Cass	*Henderson 78-08*	UMKC	
	Clark	*Dierker 1223*	UMO/ IPM	
	Cooper	*Dierker 1350*	UMO/ IPM	
	DeKalb	*Dierker 1212*	UMO/ IPM	
	Harrison	*Henderson 68-658*	UMKC	
	Howard	*Dierker 1208*	UMO/ IPM	
	Johnson	*Philbrick 1634*	UMO/ IPM	
	Knox	*Dierker 00695*	UMO/ IPM	

TABLE 2 (CONTINUED)

	Lewis	*Huckla & Obermeyer 00595*	UMO/IPM	
	Linn	*Dierker 1311*	UMO/IPM	
	Livingston	*Dierker 1215*	UMO/IPM	
	Macon	*Dierker 1312*	UMO/IPM	
	Marion	*Dierker 1618*	UMO/IPM	
	Montgomery	*Gereau & Brant 1814*	MO	
	Pike	*Summers 1101*	MO	
	Ralls	*Orzell 241*	MO	
	Randolph	*Dierker 1313*	UMO/IPM	
	St. Louis	*Denison s.n.*	MO	
	Shelby	*Dierker 1558*	UMO/IPM	
	Wright	*Castaner 4334*	MO	
	ELAEAGNACEAE			
Elaeagnus umbellata Thumb.	Douglas	*Smith 2850*	MO	1578.09
	St. Louis	*G. & K. Yatskievych 91-40*	MO	
	Ste. Genevieve	*Muehlenbach 21354*	MO	
	Shannon	*G. & K. Yatskievych 89-86*	MO	
	Stoddard	*Yatskievych & Ladd 90-334*	MO	
	Warren	*Raechal et al. 119*	MO	
	EUPHORBIACEAE			
Acalypha deamii (Weath.) H. E. Ahles	St. Louis	*Steyermark 479*	MO	1438.09
	Pulaski	*Steyermark 25410*	MO	
Croton lindheimerianus Scheele	St. Louis	*Muehlenbach 1965*	MO	1432.09
Tragia betonicifolia Nutt.	Jasper	*Demaree 40340*	SMU	1441.09
	McDonald	*Yatskievych & Smith 90-212*	MO	
Tragia ramosa Torrey	Barry	*Bush 15010*	MO	1441.19
	Jasper	*Kellogg 1029*	MO	
	Ozark	*Palmer 34726*	MO	
	Ste. Genevieve	*Kellogg 1849*	MO	
	Stone	*Bush 15955*	MO	

TABLE 2 (CONTINUED)

FABACEAE				
Aeschynomene indica L.	New Madrid	*Steyermark 83501*	UMO	1324.09
	Stoddard	*Dunn 215557*	UMO	
Desmodium strictum (Pursh) D.C.	Stoddard	*Korschgen & Toney s.n.*	UMO	1343.09
Lespedeza bicolor Turcz.	St. Louis	*Muehlenbach 3671*	MO	1357.09
Medicago minima (L.) Bartal.	Scott	*Yatskievych et al. 89-92*	MO	1304.09
Pisum sativum L. var. *sativum*	St. Louis	*Muehlenbach 2597*	MO	1382.09
Vicia cracca L.	St. Francois	*G. & K. Yatskievych 89-54*	MO	1378.09
	St. Louis	*Muehlenbach 3571*	MO	
FAGACEAE				
Quercus x introgressa P. Thompson	Lafayette	*Thompson 74-161*	MO	765.09
FUMARIACEAE				
Fumaria officinalis L.	Holt	*Henderson 67-704*	UMKC	1037.09
GENTIANACEAE				
Gentiana andrewsii Griseb. var. *andrewsii*	St. Louis	*Letterman s.n.*	MO	1734.10
	Ste. Genevieve	*Steyermark 71039*	F	
GERANIACEAE				
Erodium texanum A. Gray	St. Louis	*Muehlenbach 1711*	MO	1417.09
GROSSULARIACEAE				
[11] *Ribes americanum* Miller	Schuyler	*Ladd 15130*	MOR	1133.09
HALORAGACEAE				
Myriophyllum spicatum l.	Carter	*Summers 778*	MO	1623.09
	Crawford	*Summers 1474*	MO	
	Montgomery	*Brant & Gereau 694*	MO	
HYDRANGEACEAE				
Philadelphus coronarius L.	St. Louis	*Muehlenbach 2858*	MO	1128.09

TABLE 2 (CONTINUED)

		LAMIACEAE		
Leonurus marrubiastrum L.	Holt	*Priesendorf 847*	MO	1875.09
Lycopus uniflorus Michaux	Miller	*Steyermark 6766*	F	1907.09
	Ste. Genevieve	*Trelease 1148*	MO	
	St. Louis	*Pammel s.n.*	MO	
	Scotland	*Steyermark*	F	
Stachys hyssopifolia Michaux	St. Louis	*Eggert s.n.*	MO	1881.09
Stachys pilosa Nutt. var. *arenicola* (Britton) G. Mulligan	Franklin	*Berg 7*	MO	1879.30
	St. Louis	*Comte 2427*	MO	
		LINACEAE		
Linum virginianum L.	Bollinger	*Steyermark 14119*	MO	1407.09
	Christian	*Steyermark 23179*	MO	
	Franklin	*Steyermark 8264*	MO	
	Greene	*Blankenship s.n.*	MO	
	Howell	*Steyermark 23440*	MO	
	Iron	*Kellogg 1830*	MO	
	McDonald	*Bush s.n.*	MO	
	Ozark	*G. & K. Yatskievych 91-145*	MO	
	Reynolds	*Steyermark 19722*	MO	
	Shannon	*Steyermark 12212*	MO	
	Wayne	*Steyermark 6437*	MO	
		LOASACEAE		
Mentzelia albescens (Gillies & Arn.) Griseb.	Crawford	*Christ s.n.*	MO	1574.09
	Jasper	*Palmer 69221*	MO	
	Pulaski	*Summers 4670*	MO	
		MAGNOLIACEAE		
Magnolia tripetala L.	St. Louis	*Harriman 3071*	OSH	960.09
		MALVACEAE		
Gossypium hirsutum L.	Dunklin	*Eggert s.n.*	MO	1534.09
	Jasper	*Palmer 1488*	MO	
	Jackson	*Bush 9473*	MO	
	St. Louis	*Muehlenbach 3031*	MO	
		MIMOSACEAE		
Albizia julibrissin Durazz.	Stoddard	*Yatskievych & Ladd 90-338*	MO	1271.09
	Wayne	*Thompson s.n.*	BEREA	

TABLE 2 (CONTINUED)

OLEACEAE				
[4]*Ligustrum obtusifolium* Sieb. & & Zucc.	Franklin	*Davit s.n.*	MO	1722.09
[4]*Ligustrum sinense* Lour.	Dunklin	*Yatskievych & Ladd 90-296*	MO	1722.19
ONAGRACEAE				
Gaura sinuata Nutt.ex Ser.	St. Louis	*Muehlenbach 2760*	MO	1618.09
Oenothera clelandii W. Dietr., Raven & W. L. Wagner	Clark	*Wilson s.n.*	MO	1604.09
	Jackson	*Bush 2139*	MO	
	St. Louis	*Muehlenbach 942*	MO	
	Washington	*Bush 9414*	F	
Oenothera heterophylla Spach ssp. *heteroophylla*	St. Louis	*Muehlenbach 1018*	MO	1604.19
OROBANCHACEAE				
Orobanche multiflora Nutt.	McDonald	*Drew s.n.*	UMO	
	Taney	*Smith 2903*	MO	2015A.09
PAPAVERACEAE				
Eschscholzia californica Cham.	St. Louis	*Muehlenbach 1788*	MO	1029.09
PLANTIAGINACEAE				
Plantago arenaria Waldst. & Kit.	St. Louis	*Muehlenbach 3977*	MO	2036.09
Plantago wrightiana Decne.	St. Louis	*Muehlenbach 1779*	MO	2030.09
PLUMBAGINACEAE				
Ceratostigma plumbaginoides Bunge	Boone	*Dunn 22697*	UMO	844.09
POLYGONACEAE				
Polygonum cuspidatum Siebold & Zucc. var. compactum (Hook. f.) L. H. Bailey	St. Louis	*Muehlenbach 3356*	MO	841.10
Rumex dentatus L.	St. Louis	*Muehlenbach 3195*	MO	817.09
PRIMULACEAE				
Dodecatheon frenchii (Vasey) Rydb.	Ste. Genevieve	*Nelson 1809*	MO	1698.09

TABLE 2 (CONTINUED)

RANUNCULACEAE				
Anemone quinquefolia L.	Shannon	*Christ s.n.*	MO	1001.09
Caltha palustris L. var. *palustris*	Lafayette	*Gremaud s.n.*	MO	964.09
Clematis catesbyana Pursh	Barry	Trelease 935	MO	1004.09
	Christian	*Steyermark 23111*	MO	
	Douglas	*Steyermark 23642*	MO	
	Greene	*Stalker & Nelson 478*	NCU	
	Howell	*Summers 1079*	MO	
	Shannon	*Bush 1*	MO	
	Stone	*Palmer 23881*	MO	
	Taney	*Bush 99*	MO	
Consolida regalis Gray	St. Louis	*Muehlenbach 3106*	MO	971.09
Ranunculus ficaria L. var. *bulbifera* Marsden-Jones	Cole	*Figg s.n.*	MO	995A.09
	St. Louis	*Brown s.n.*	MO	995A.09
[10]*Ranunculus testicularis* Crantz.	Lewis	*Ladd 14840*	MO	981.09
	Lincoln	*Schuette 1380*	MO	
	Montgomery	*D. & C. Darigo 1101*	MO	
RESEDACEAE				
Reseda lutea L. ssp. *lutea* var. *lutea*	St. Louis	*Muehlenbach 3931*	MO	1110.09
ROSACEAE				
[4]*Aphanes microcarpa* (Boiss. & Reuter) Rothm.	Howell	*Summers 3248*	MO	1241.09
Geum virginianum L.	Ste. Genevieve	*Solecki*	MODNR	
Malus baccata (L.) Borkh.	St. Louis	*Muehlenbach 3402*	MO	1147.09
Potentilla argentea L.	St. Louis	*Muehlenbach 3584*	MO	1215.09
Prunus armeniaca L.	St. Louis	*Muehlenbach 2987*	MO	1263.09
Spiraea x vanhouttei (Briot) Zabel	Barry	*Redfearn & Eggers 14431*	SMS	1139.09
	Stoddard	*Hall 42*	SEMO	
RUBIACEAE				
Galium divaricatum Pourret ex Lam.	Henry	*Castaner 5831*	WARM	2039.09
Galium pedemontanum (Bellardi) All.	Christian	*Sanders 2801*	SOTO	2039.19
	Cole	*Raveill 2053*	MO	
	Greene	*Brant & Gereau 552*	MO	
	Iron	*Ahles 7960*	KANU	
	Oregon	*Summers 3177*	MO	
	Osage	*Brant & O'Donnell 1853*	MO	

TABLE 2 (CONTINUED)

	Taney	*Sanders 2785*	MICH	
	Wright	*Brant & Gereau 560*	MO	
	SALICACEAE			
Salix x rubens Schrank	St. Louis	*Muehlenbach 2068*	MO	718.09
	SAXIFRAGACEAE			
Heuchera americana L. var. *americana*	McDonald	*Kellogg s.n.*	MO	1124.20
	St. Louis	*Engelmann s.n.*	WIS	
	SCROPHULARIACEAE			
Veronica anagallis-aquatica L.	Taney	*Olson s.n.*	SOTO	1986.09
[4]*Veronica beccabunga* L.	Ste.Genevieve	*Summers 219*	MO	1986.19
Veronica chamaedrys L.	Boone	*Love 438*	UMO	1986.29
Veronica hederifolia L.	Barry	*Toney s.n.*	UMO	1989.09
	Greene	*Key 2128*	SMS	
	Jefferson	*Yatskievych et al. 90-25*	MO	
	St. Louis	*Anderson s.n.*	MO	
Veronica latifolia L.	Johnson	*Barrow 140*	WARM	1986.39
Veronica persica Poiret	Boone	*Dunn 23526*	UMO	1989.19
	Johnson	*Praetorius 63*	WARM	
	SOLANACEAE			
Physalis acutifolia (Wiers) Sandw.	St. Louis	*Muehlenbach 759*	MO	1935.09
Physalis alkekengi L.	Boone	*Dunn 13806*	UMO	1937.09
	Callaway	*Craghead s.n.*	UMO	
	STERCULIACEAE			
Melochia corchorifolia L.	St. Louis	*Muehlenbach 2880*	MO	1514.09
	ULMACEAE			
Ulmus crassifolia Nutt.	Butler	Pelton s.n.	MO	780.09
	Dunklin	*Heineke s.n.*	MO	
	VALERIANACEAE			
Valerianella woodsiana (Torrey & A. Gray) Walp.	St. Louis	*Glatfelter s.n.*	MICH	2086.09

TABLE 2 (CONTINUED)

VERBENACEAE				
Verbena brasiliensis Vell. Conc.	St. Louis	*Muehlenbach 3439*	MO	1840.09
Verbena officinalis L. ssp. *halei* (Small) S. Barber	St. Louis	*Muehlenbach 1256*	MO	1840.19
VIOLACEAE				
Viola arvensis Murray	St. Louis	*Muehlenbach 3863*	MO	1571.09
VITACEAE				
[11]*Parthenocissus tricuspidata* (Sieblod & Zucc.) Planchon	St. Louis	*Muehlenbach 2927*	MO	1504.09

[1] The Nature Conservancy, 1991
[2] Carter and Bryson, 1991
[3] Whitley et al., 1990
[4] Yatskievych and Summers, 1991
[5] Ebinger and McClain, 1991
[6] Summers and Yatskievych, 1990
[7] Ladd, 1990
[8] Sullivan, 1991
[9] Muehlenbach, 1979
[10] Ladd and Schuette, 1990
[11] Ladd et al., 1991

A NEW *ERYNGIUM* FOR MISSOURI

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In late September, 1990, a specimen of Leavenworth eryngo, *Eryngium leavenworthii* Torrey & Gray was submitted for identification to the Integrated Pest Management office of the University, Columbia. The specimen was subsequently deposited as a voucher specimen in the University of Missouri Herbaium (UMO), UMO #178954. Based upon questionable label information on an 1879 specimen collected by Broadhead, Steyermark (1963) excluded this species from his flora of the state. Therefore, the collection reported here is a new record for Missouri.

According to R. Redman of the U.S.D.A., S.C.S. Office in Butler, MO, the specimen, along with several hundred others of the same species, was growing in a pasture in Bates County a few miles east of Butler. A variety of native grasses and introduced forbs and grasses constituted the plant community of the pasture. Information submitted with the plant indicated that several plants had been noted in the pasture in 1989. By 1990 several hundred had appeared. It was conjectured that the seed was probably contained in hay brought in from Nebraska in 1988. However, neither the Great Plans Flora Association (G.P.F.A.) (1977) nor McGregor (1986) indicate the presence of this plant in Nebraska. This, however, does not negate its unreported presence there. The presence of the plant in Crawford, Bourbon, and Linn Counties, Kansas which border Missouri in the vicinity of Bates County Missouri is indicated (G.P.F.A. 1977).

Eryngium leavenworthii is readily separated from the other two species of the genus known to Missouri. It is separated from *Eryngium yuccifolium*, which has parallel-veined leaves, by its spine tipped, net-veined, palmately pinnatifid leaves. The purplish to reddish (white) flowering heads topped by four to eight erect spinescent bractlets 1-3.5 cm long are strikingly different from the whitish flowering heads of *Eryngium yuccifolium*, which lack these terminal bractlets. *Eryngium leavenworthii* is an annual or winter annual with a taproot: *Eryngium yuccifolium* is a perennial with fascicles of tuberous roots. Both *Eryngium leavenworthii* and *E. yuccifolium* are erect growing plants while the third species, *Eryngium prostratum*, grows prostrate on the ground, has small heads of blue flowers,

and is a perennial with fibrous roots.

LITERATURE CITED

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Steyermark, J. A. 1963. *Flora of Missouri*. Iowa State Univ. Press, Ames. lxxxiii, 1725 pp.